

CLAIMS

1. An equipment cost estimate calculation program (46), comprising:

an input prompt step for issuing a prompt to present a computer (40) with equipment data that includes

5 first estimated performance data, which is performance data of current equipment (60) estimated when a no-maintenance action is carried out in which said current equipment (60) is not maintained or repaired but is left as-is after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection,

10 second estimated performance data, which is performance data of said current equipment (60) estimated when maintenance or other action is carried out in which said current equipment (60) is maintained or repaired after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection,

15 third performance data, which is performance data of new equipment, maintenance or other action cost data, which is data of the required cost for said maintenance or other action, and new-equipment installation cost data, which is data of the required cost for installing said new equipment;

20 a first estimated running cost calculation step for using said first estimated performance data and calculating in said computer (40) a first running cost estimate, which is the estimated value of the running cost of said current equipment (60) when said no-maintenance action is carried out;

25 a second estimated running cost calculation step for using said second estimated performance data and calculating in said computer (40) a second running cost estimate, which is the estimated value of the running cost of said current equipment (60) when said maintenance or other action is carried out;

30 a third estimated running cost calculation step for using said third performance data and calculating in said computer (40) a third running cost estimate, which is the estimated value of the running cost of said new equipment;

a no-maintenance action total cost estimate calculation step for at least using said first running cost estimate and calculating in said computer (40) a no-maintenance action total cost estimate, which is the estimated value of the total cost for a prescribed period of time required when said no-maintenance action is carried out;

a maintenance or other action total cost estimate calculation step for at least using said second running cost estimate and said maintenance or other action cost data, and calculating in said computer (40) a maintenance or other action total cost estimate, which is the estimated value of the total cost for said prescribed period of time required when said maintenance or other action is carried out;

a new-equipment installation total cost estimate calculation step for at least using said third running cost estimate and said new-equipment installation cost data and calculating in said computer (40) a new-equipment installation total cost estimate, which is the estimated value of the total cost for said prescribed period of time required when said current equipment (60) is discarded after said current equipment (60) has become obsolete or broken down, or undergone said periodic inspection, and said new equipment is installed; and

an output step for outputting from said computer (40) said no-maintenance action total cost estimate, said maintenance or other action total cost estimate, and said new-equipment installation total cost estimate.

2. The equipment cost estimate calculation program (46) as recited in Claim 1, wherein a first repair pattern or a first maintenance pattern, and a second repair pattern or a second maintenance pattern are included in said repair or said maintenance.

3. The equipment cost estimate calculation program (46) as recited in Claim 1 or Claim 2, wherein

said no-maintenance action total cost estimate, said maintenance or other action total cost estimate, and said new-equipment installation total cost estimate are output to the same sheet or same page in said computer (40) in said output step.

4. The equipment cost estimate calculation program (46) as recited in any of Claim 1 to Claim 3, wherein

said equipment data further includes discard cost data of said current equipment, and said new-equipment installation total cost estimate is calculated in said computer (40) in said new-equipment installation total cost estimate calculation step by using said third running cost estimate, said new-equipment installation cost data, and said discard cost data of said current equipment (60).

5. The equipment cost estimate calculation program (46) as recited in any of Claim 1 to Claim 5,

further comprising a residual life expectancy calculation step for calculating in said computer (40) the value of the residual life expectancy of said current equipment (60)

or said new equipment by using said first estimated performance data, said second estimated performance data, and said third performance data

wherein,

the value of said residual life expectancy is further output from said computer in said output step.

6. The equipment cost estimate calculation program (46) as recited in any of Claim 1 to Claim 5,

further comprising a carbon dioxide emission forecast calculation step for calculating in said computer (40) the carbon dioxide emission forecast of said current equipment (60) or said new equipment by using said first estimated performance data, said second estimated performance data, and said third performance data

wherein,

said carbon dioxide emission forecast is further output from said computer (40) in said output step.

7. The equipment cost estimate calculation program (46) as recited in any of Claim 1 to Claim 6, wherein

a regulatory line is further output from said computer (40) in said output step.

8. The equipment cost estimate calculation program (46) as recited in any of Claim 1 to Claim 7, wherein

the result of said output is displayed as a graph.

9. An equipment cost estimate calculation apparatus (40), comprising:

input means (52, 53) for inputting equipment data that includes

first estimated performance data, which is performance data of current equipment (60) estimated when a no-maintenance action is carried out in which said current equipment (60) is not maintained or repaired but is left as-is after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection,

second estimated performance data, which is performance data of said current equipment (60) estimated when maintenance or other action is carried out in which said current equipment (60) is maintained or repaired after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection,

third performance data, which is performance data of new equipment;

maintenance or other action cost data, which is data of the required cost for said maintenance or other action, and
new-equipment installation cost data, which is data of the required cost for installing said new equipment;

- 5 a first estimated running cost calculation means (42) for using said first estimated performance data and calculating a first running cost estimate, which is the estimated value of the running cost of said current equipment (60) when said no-maintenance action is carried out;
- 10 a second estimated running cost calculation means (42) for using said second estimated performance data and calculating a second running cost estimate, which is the estimated value of the running cost of said current equipment (60) when said maintenance or other action is carried out;
- 15 a third estimated running cost calculation means (42) for using said third performance data and calculating a third running cost estimate, which is the estimated value of the running cost of said new equipment;
- a no-maintenance action total cost estimate calculation means (42) for at least using said first running cost estimate and calculating a no-maintenance action total cost estimate, which is the estimated value of the total cost for a prescribed period of time required when said no-maintenance action is carried out;
- 20 a maintenance or other action total cost estimate calculation means (42) for at least using said second running cost estimate and said maintenance or other action cost data, and calculating a maintenance or other action total cost estimate, which is the estimated value of the total cost for said prescribed period of time required when said maintenance or other action is carried out;
- 25 a new-equipment installation total cost estimate calculation means (42) for at least using said third running cost estimate and said new-equipment installation cost data and calculating a new-equipment installation total cost estimate, which is the estimated value of the total cost for said prescribed period of time required when said current equipment (60) is discarded after said current equipment (60) has become
- 30 obsolete or broken down, or has undergone a periodic inspection, and said new equipment is installed; and
- an output means (51) for outputting said no-maintenance action total cost estimate, said maintenance or other action total cost estimate, and said new-equipment installation total cost estimate.

10. An equipment cost estimate calculation program (46), comprising:

a first estimated running cost calculation step for using said first estimated performance data, which is performance data of current equipment (60) estimated when a no-maintenance action is carried out in which said current equipment (60) is not maintained or repaired but is left as-is after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection, and calculating in said computer (40) a first running cost estimate, which is the estimated value of the running cost of said current equipment (60) when said no-maintenance action is carried out;

a second estimated running cost calculation step for using said second estimated performance data, which is performance data of said current equipment (60) estimated when maintenance or other action is carried out in which said current equipment (60) is maintained or repaired after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection, and calculating in said computer (40) a second running cost estimate, which is the estimated value of the running cost of said current equipment (60) when said maintenance or other action is carried out;

a third estimated running cost calculation step for using said third performance data, which is new equipment performance data, and calculating in said computer (40) a third running cost estimate, which is the estimated value of the running cost of said new equipment;

a no-maintenance action total cost estimate calculation step for at least using said first running cost estimate and calculating in said computer (40) a no-maintenance action total cost estimate, which is the estimated value of the total cost for a prescribed period of time required when said no-maintenance action is carried out;

a maintenance or other action total cost estimate calculation step for at least using said second running cost estimate and said maintenance or other action cost data, which is data of the required cost for said maintenance or other action, and calculating in said computer (40) a maintenance or other action total cost estimate, which is the estimated value of the total cost for said prescribed period of time required when said maintenance or other action is carried out;

a new-equipment installation total cost estimate calculation step for at least using said third running cost estimate and said new-equipment installation cost data, which is data of the required cost for installing said new equipment, and calculating in said

computer (40) a new-equipment installation total cost estimate, which is the estimated value of the total cost for said prescribed period of time required when said current equipment (60) is discarded after said current equipment (60) has become obsolete or broken down, or undergone said periodic inspection, and said new equipment is installed; and

an output step for outputting from said computer (40) said no-maintenance action total cost estimate, said maintenance or other action total cost estimate, and said new-equipment installation total cost estimate.

11. An equipment cost estimate calculation apparatus (40), comprising:

a storage unit (44) for retaining equipment data that includes

first estimated performance data, which is performance data of current equipment (60) estimated when a no-maintenance action is carried out in which said current equipment (60) is not maintained or repaired but is left as-is after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection,

second estimated performance data, which is performance data of said current equipment (60) estimated when maintenance or other action is carried out in which said current equipment (60) is maintained or repaired after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection,

third performance data, which is performance data of new equipment, maintenance or other action cost data, which is data of the required cost for said maintenance or other action, and

new-equipment installation cost data, which is data of the required cost for installing said new equipment;

a first estimated running cost calculation means (42) for using said first estimated performance data and calculating a first running cost estimate, which is the estimated value of the running cost of said current equipment (60) when said no-maintenance action is carried out;

a second estimated running cost calculation means (42) for using said second estimated performance data and calculating a second running cost estimate, which is the estimated value of the running cost of said current equipment (60) when said maintenance or other action is carried out;

a third estimated running cost calculation means (42) for using said third performance data and calculating a third running cost estimate, which is the estimated value of the running cost of said new equipment;

a no-maintenance action total cost estimate calculation means (42) for at least using said first running cost estimate and calculating a no-maintenance action total cost estimate, which is the estimated value of the total cost for a prescribed period of time required when said no-maintenance action is carried out;

a maintenance or other action total cost estimate calculation means (42) for at least using said second running cost estimate and said maintenance or other action cost data, and calculating a maintenance or other action total cost estimate, which is the estimated value of the total cost for said prescribed period of time required when said maintenance or other action is carried out;

a new-equipment installation total cost estimate calculation means (42) for at least using said third running cost estimate and said new-equipment installation cost data, and calculating a new-equipment installation total cost estimate, which is the estimated value of the total cost for said prescribed period of time required when said current equipment (60) is discarded after said current equipment (60) has become obsolete or broken down, or has undergone a periodic inspection, and said new equipment is installed; and

an output means (51) for outputting said no-maintenance action total cost estimate, said maintenance or other action total cost estimate, and said new-equipment installation total cost estimate.